

What is claimed is:

1. An original size detecting apparatus comprising:

5 an original platen;

an original presser plate that presses an original placed on said original platen;

a light source that irradiates light onto the original;

10 a reflected light-reading device that reads reflected light of the light irradiated from said light source onto the original;

an open state-detecting device that detects at least two open states of said original presser plate;

15 and

an original size-determining device that performs predetermined control corresponding to each of the open states of said original presser plate detected by said open state-detecting device, to determine a size of the
20 original based on a result of the reading by said reflected light-reading device.

2. An original size detecting apparatus comprising:

an original platen;

25 an original presser plate that presses an original placed on said original platen;

a light source that irradiates light onto the

original;

a reflected light-reading device that reads reflected light of the light irradiated from said light source onto the original;

5 an open state-detecting device that detects at least two open states of said original presser plate; and

an original size-determining device that turns on said light source and said reflected light-reading
10 device when it is detected by said open state-detecting device that said original presser plate is in a first open state, and determines a size of the original based on an output from said reflected light-reading device when it is detected by said open state-detecting device
15 that said original presser plate is in a second open state where an opening angle thereof is smaller than when said original presser plate is in the first open state.

3. An original size detecting apparatus as
20 claimed in claim 2, wherein said original size-determining device is operable when said original presser plate is in an open state where the opening angle thereof is larger than when said original presser plate is in the first open state, to turn off said
25 light source and said reflected light-reading device.

4. An original size detecting apparatus as claimed in claim 2, comprising a sub-scanning direction

dimension-detecting device that detects a dimension of the original in a sub-scanning direction, and

wherein said original size-determining device determines the size of the original based on an output
5 from said sub-scanning direction dimension-detecting device and an output from said reflected light-reading device.

5. An original size detecting apparatus comprising:

10 an original platen that supports an original to be read;

a light source that irradiates light onto the original;

a first detecting device that detects whether or
15 not a dimension of the original in a sub-scanning direction is equal to or smaller than a predetermined dimension;

a second detecting device that detects a dimension of the original in a main-scanning direction orthogonal
20 to the sub-scanning direction; and

a control and determining device that controls said first and second detecting devices to determine a size of the original based on respective results of detections by said first and second detecting devices,

25 wherein said control and determining device carries out a first original size-determining process when an output from said second detecting device

indicative of a result of detection carried out thereby with said light source turned off contains components having smaller values than a predetermined output value, and carries out a second original size-determining
5 process when the output from said second detecting device indicative of the result of detection carried out thereby is equal to or larger than the predetermined output value.

6. An original size detecting apparatus as
10 claimed in claim 5, wherein the first original size-determining process comprises excluding points on said original platen corresponding to values of the output from said second detecting device which are equal to or larger than the predetermined output value, and
15 determining the size of the original based on a result of detection carried out again by said second detecting device with said light source turned on, and a result of the detection carried out by said first detecting device.

20 7. An original size detecting apparatus as claimed in claim 5, wherein the second original size-determining process comprises detecting an edge in the output from said second detecting device indicative of the result of the detection carried out thereby with
25 said light source turned off, by comparing the output with a threshold value, determining a position on said original platen where the edge has been detected as a

position of an end of the original, and then determining the size of the original based on the result of the detection by said first detecting device and the position of the end of the original.

5 8. An original size detecting method comprising:
 a reflected light-reading step of reading
reflected light of light irradiated from a light source
onto an original which is placed on an original platen
and pressed by an original presser plate;

10 an open state-detecting step of detecting at least
two open states of the original presser plate; and
 an original size-determining step of performing
predetermined control corresponding to each of the open
states of the original presser plate detected in said
15 open state-detecting step, to determine a size of the
original based on a result of the reading in said
reflected light-reading step.

 9. An original size detecting method comprising:
 a reflected light-reading step of causing a
20 reflected light-reading device to read reflected light
of light irradiated from a light source onto an
original which is placed on an original platen and
pressed by an original presser plate;

 an open state-detecting step of detecting at least
25 two open states of the original presser plate; and
 an original size-determining step of turning on
the light source and the reflected light-reading device

when it is detected in said open state-detecting step that the original presser plate is in a first open state, and determining a size of the original based on an output from the reflected light-reading device in
5 said reflected light-reading step when it is detected in said open state-detecting step that the original presser plate is in a second open state where an opening angle thereof is smaller than when the original presser plate is in the first open state.

10 10. An original size detecting method as claimed in claim 9, wherein when said original presser plate is in an open state where the opening angle thereof is larger than when said original presser plate is in the first open state, said original size-determining step
15 comprises turning off the light source and the reflected light-reading device.

11. An original size detecting method as claimed in claim 9, comprising a sub-scanning direction dimension-detecting step of detecting a dimension of
20 the original in a sub-scanning direction, and

wherein said original size-determining step comprises determining the size of the original based on an output obtained in said sub-scanning direction dimension-detecting step and an output obtained in the
25 reflected light-reading device.

12. An original size detecting method applied to an original size detecting apparatus including an

original platen that supports an original to be read,
and a light source that irradiates light onto the
original,

the method comprising:

5 a first detecting step of detecting whether or not
a dimension of the original in a sub-scanning direction
is equal to or smaller than a predetermined dimension
and generating an output indicative of a result of the
detection;

10 a second detecting step of detecting a dimension
of the original in a main-scanning direction orthogonal
to the sub-scanning direction and generating an output
indicative of a result of the detection; and

 a control and determining step of controlling said
15 first and second detecting steps to determine a size of
the original based on respective results of detections
in said first and second detecting steps, and

 wherein said control and determining step
comprises carrying out a first original size-
20 determining process when the output indicative of the
result of detection carried out in said second
detecting step with the light source turned off
contains components having smaller values than a
predetermined output value, and carrying out a second
25 original size-determining process when the output
indicative of the result of the detection in said
second detecting step is equal to or larger than the

predetermined output value.

13. An original size detecting method as claimed in claim 12, wherein the first original size-determining process comprises excluding points on the original platen corresponding to values of the output generated in said second detecting step which are equal to or larger than the predetermined output value, and determining the size of the original based on a result of detection carried out again in executing said second detecting step with the light source turned on, and the result of the detection carried out in said first detecting step.

14. An original size detecting method as claimed in claim 12, wherein the second original size-determining process comprises detecting an edge in the output indicative of the result of the detection carried out in said second detecting step with said light source turned off, by comparing the output with a threshold value, determining a position on the original platen where the edge has been detected as a position of an end of the original, and then determining the size of the original based on the result of the detection carried out in said first detecting step and the position of the end of the original.

15. An original size detecting program carried out by an original size detecting apparatus including an original platen, an original presser plate that

presses an original placed on the original platen, and
a light source that irradiates light onto the original,
the program comprising:

a reflected light-reading module for reading
5 reflected light of the light irradiated from the light
source onto the original;

an open state-detecting module for detecting at
least two open states of the original presser plate;
and

10 an original size-determining module for performing
predetermined control corresponding to each of the open
states of the original presser plate detected by said
open state-detecting module, to determine a size of the
original based on a result of the reading by said
15 reflected light-reading module.

16. An original size detecting program executed
by an original size detecting apparatus including an
original platen, an original presser plate that presses
an original placed on the original platen, and a light
20 source that irradiates light onto the original,

the program comprising:

a reflected light-reading module for causing a
reflected light-reading device to read reflected light
of the light irradiated from the light source onto the
25 original;

an open state-detecting module for detecting at
least two open states of the original presser plate;

and

an original size-determining module for turning on the light source and the reflected light-reading device when it is detected by said open state-detecting device
5 that the original presser plate is in a first open state, and determining a size of the original based on an output from the reflected light-reading device when it is detected by said open state-detecting module that the original presser plate is in a second open state
10 where an opening angle thereof is smaller than when the original presser plate is in the first open state.

17. An original size detecting program executed by an original size detecting apparatus including an original platen that supports an original to be read,
15 and a light source that irradiates light onto the original,

the program comprising:

a first detecting module for detecting whether or not a dimension of the original in a sub-scanning
20 direction is equal to or smaller than a predetermined dimension and generating an output indicative of a result of the detection;

a second detecting device module for detecting a dimension of the original in a main-scanning direction
25 orthogonal to the sub-scanning direction and generating an output indicative of a result of the detection; and

a control and determining module for controlling

said first and second detecting modules and determining a size of the original based on respective results of detections by said first and second detecting modules,

wherein said control and determining module

- 5 carries out a first original size-determining process when the output indicative of the result of detection carried out by said second detecting module with the light source turned off contains components having smaller values than a predetermined output value, and
- 10 carries out a second original size-determining process when the output indicative of the result of the detection by said second detecting module is equal to or larger than the predetermined output value.